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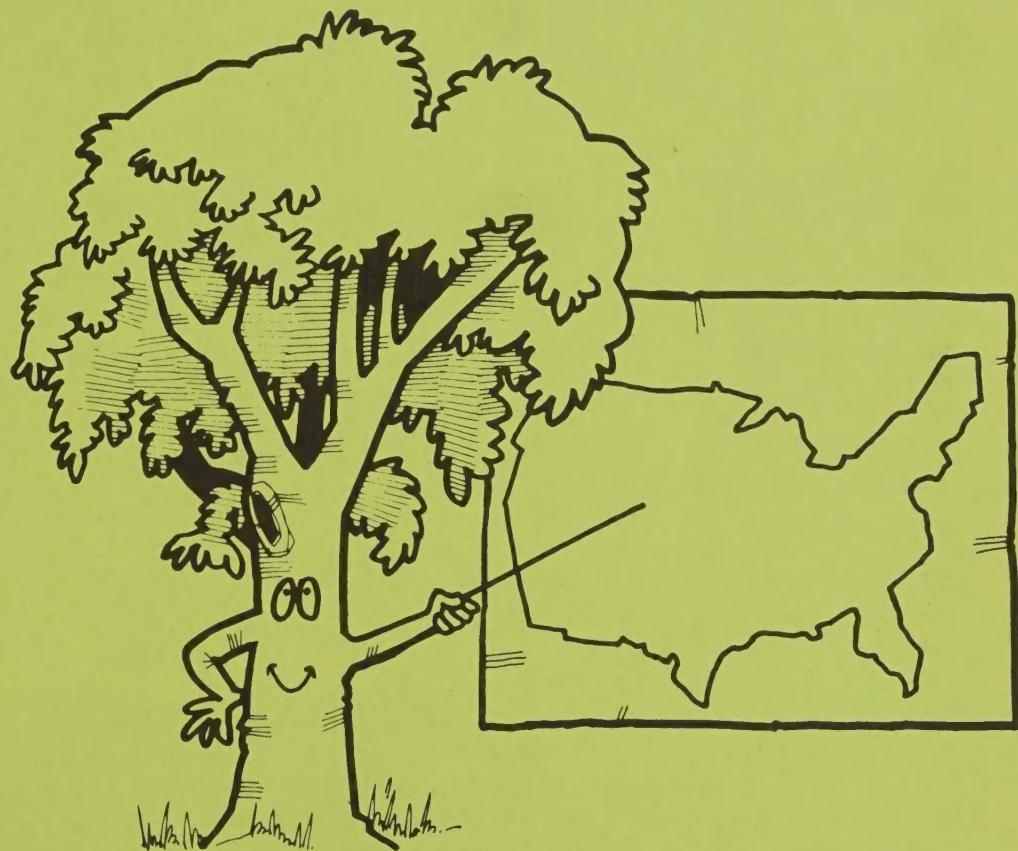
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# The National Dutch Elm Disease Demonstration Program

The Federal Summary Report 1982

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TECHNICAL ASSISTANCE AND PUBLIC INFORMATION OUTREACH PROGRAM  
FOR DUTCH ELM DISEASE CONTROL AND ELM TREE UTILIZATION

FEDERAL SUMMARY REPORT  
November 1982

U.S. Department of Agriculture  
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Summary

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The 1978-1981 National Dutch Elm Disease Demonstration Program was a success. Disease incidence was reduced in two-thirds of the 38 demonstration cities in the five participating States. City officials and managers as well as the general public have been made more aware of the seriousness of Dutch elm disease and how to combat it. One State employee working with the Program very effectively summarized these accomplishments when he said, "During the past 4 years, losses to Dutch elm disease have been reduced, more trees are being planted to replace those lost, and there is a greater appreciation of the needs of both young and established trees."

Introduction

In fiscal year 1978, Congress appropriated \$2.5 million general forestry assistance funds in the USDA Forest Service, State and Private Forestry budget to initiate a 5-year Technical Assistance and Public Information Outreach Program for Dutch Elm Disease (DED) Control and Elm Tree Utilization (Conference Report No. 95-461, Public Law 95-74). This Program will hereafter be referred to as the National DED Demonstration Program or simply, Program. In fiscal years 1979, 1980, and 1981, \$2.6 million, \$2.0 million, and \$0.5 million, respectively, were appropriated for the continuation of the Program. In FY 1982, \$50,000 of Forest Service funds were made available for final program wrap-up. A breakdown of allocations by States is shown in Appendix A.

At the national level the Program was a cooperative effort between the USDA Forest Service and the USDA Extension Service. At the State level, the Program was carried out by the State Cooperative Extension Service and the State agency cooperating with the USDA Forest Service. 1/

Five States were selected to participate in the Program: California, Colorado, Georgia, Minnesota, and Wisconsin. In these States, 38 DED demonstration cities were selected. State selection considerations included geographic location, percent of the elm population lost to DED, and prior experience in DED control. An effort was made to represent different sections of the United States as well as to select States that had more than 50 percent of their elm population remaining. In the North-central States, Wisconsin had 56 percent of their elms remaining and Minnesota had 88 percent. In the South, Georgia had 75 percent. In the West, Colorado had 99 percent remaining and California had over 99 percent remaining. None of the Northeastern States had over 50 percent of their elms remaining.

1/ California Department of Food and Agriculture  
Colorado State Forest Service  
Georgia Forestry Commission  
Minnesota Department of Natural Resources  
Wisconsin Department of Natural Resources

### Program Objectives

The objectives of the Program were on a nationwide basis to (1) make available information and education to communities, municipal governments, landowners, and individual homeowners on the history, incidence, severity, and management of DED; (2) make available information and education on the utilization of elm trees infected and killed by DED; and (3) establish and maintain, in selected areas of the United States, demonstration sites showing the application and results of effective DED management and utilization programs.

### Results

More detailed results can be found in the "National Dutch Elm Disease Demonstration Program: State Summary Report 1978-1981." 2/ Even more detailed data are contained in each State's annual reports. These are available from the participating State agencies. Overall, the Program can be termed successful.

There are several ways to measure the success of the Program, including (1) reduction in DED incidence in the demonstration cities; (2) type and amount of public outreach information presented; (3) audience awareness; and (4) effect on the future of DED control. After 4 years, there are strong positive results for the first two, moderately strong, positive results for the third, and indications that the fourth will be positive, with effective followup.

#### DED incidence reduction

The overall incidence of DED declined in the demonstration cities over the 4-year period as shown in Table 1.

Table 1. State summary of DED incidence in cities participating in the National DED Demonstration Program.

State	DED Incidence (%)			No. Cities with:	
	1978	1981	Diff.	Decrease	Increase
Minnesota	4.01	3.39	- 0.62	4	2
Wisconsin	6.87	5.61	- 1.26	11	5
California	0.22	0.47 *	+ 0.25	2	5
Colorado **	0.43	0.16	- 0.27	5	0
Georgia	4.59	0.85	- 3.74	4	0

\* The California Demonstration Program ended after 3 years in 1980.

\*\* One Colorado city began in 1979.

Four of the five States showed a decrease (Minnesota, Wisconsin, Colorado, and Georgia). California showed an increase of 0.25 percent. In this case, dropping out of the Program during the fourth year may have contributed to

2/ Available from USDA Forest Service, Forest Pest Management, P.O. Box 2417, Washington, DC 20013.

the increase. Twenty-six of the 38 cities (68 percent) in the demonstration areas showed a decline in DED. Without a DED program, incidence would have been expected to increase in most of the cities. Instead of the two-thirds of the cities showing a decrease in DED incidence, about three-fourths of the cities would probably have shown an increase. Results from the demonstration cities definitely show that a practical and disciplined DED control program can reduce losses from DED.

The DED situation was uniquely different in each of the five States; therefore, the control practices differed somewhat from State to State. However, each State built on the same two essential components for effective DED control--surveys and sanitation. First, each State conducted thorough surveys and inspections of their elm population. These surveys were generally conducted three or more times each year. The objective was to discover DED, or conditions that favor DED, very early in its development. Second, the States carried out a complete sanitation program. Sanitation involves the removal and disposal of all dead and dying elm trees, branches, or wood that has the bark intact. The objective is to remove DED infected wood as well as the breeding sites of the bark beetles that help spread the DED fungus. Effective disease detection surveys and sanitation are the foundation for a successful DED control program. Several other DED control practices were conducted by one or more of the States, but always in addition to surveys and sanitation. These practices included: root graft barrier placement, insecticide spraying, elimination of wild elms, and chemical injection of fungicides.

Regarding utilization of the elmwood, several avenues were explored, including lumber, woodchips for fuel, and firewood. Overall, utilization of elmwood for firewood was the most practical and successful. Fumigating large stacks of diseased wood shortly after it was cut proved to be an effective way of preventing bark beetles from spreading to healthy trees. The treated wood could then be used for firewood.

#### Public outreach information

A variety of public outreach approaches were employed by the five demonstration States. Table 2 shows a summary of these efforts.

Table 2. Five-State public outreach information summary.

Item	Number
Training Sessions	220
Presentations at College Seminars and Professional Meetings	30
Public Outreach Talks	100
Phone Responses	10,000
News Releases	280
Radio-TV Broadcasts	330
Publications	160
Slide Sets and Slide Tapes	17
Displays and Exhibits	65
Movies	3

Training sessions were given to groups such as County Extension Agents, farm advisors, master gardeners, tree inspectors, and special interest groups. They were taught how to survey, mark trees for removal, perform pruning and tree removal, install root graft barriers, inject systemic fungicides, utilize or disperse diseased or insect-infested elmwood, and control bark beetles. An estimated 16,000 to 18,000 persons received training. In addition to training, the public outreach information was aimed primarily toward making the public aware of the seriousness of the DED problem and its management. It was stressed to the public that DED cannot be totally controlled, but losses can be suppressed over many years, allowing time to plan and systematically establish new urban forests.

#### Audience awareness

Audience awareness results can be separated for two groups: (1) those working directly with the cities' trees; e.g., the city officials, managers, and laborers, and (2) the general public. The first group was definitely made more aware of the DED problem, as evidenced by the success of the demonstrations. Cities that had no urban forestry program or no more than basic tree removal programs were elevated to performing highly efficient sanitation programs by using known disease and insect management practices.

Evaluating the general public's awareness is more subjective due to the difficulty in measuring this variable. In virtually all of the demonstration cities, public reaction became more favorable as the program progressed. Consultation requests grew, and the DED information newsletters prepared by the States grew in popularity as the Program progressed. Also, as public awareness increased, there was increased support by public agencies and private businesses.

#### Future effects

Possibly the biggest single impact of this National DED Demonstration Program is the effect it will have on the future of DED management. City officials in some of the 38 demonstration cities plan to continue with the Program without Federal funds. In other cities, the Program will not continue, at least at the 1981 level of management, because city officials lack funds for this activity. Still, Program managers in all of the demonstration cities and many others that were influenced by the Program now understand the basics of an effective DED management program and they know the value of such a program. City officials in several cities not in the Program have expressed an interest in starting urban forestry programs as a result of the DED management information they received. This in itself is a major success; the National DED Demonstration Program is promoting urban forestry programs through tree-care awareness.

Also, many phases of the training, educational, and public outreach programs will continue. Movies and slide tapes will be advertised and circulated, as will many of the publications. And although several of the technical specialists working with the Program found other jobs when the Program ended, others will continue to work with DED and their training and public outreach will continue, but to a lesser degree.

Program activities in the fifth and final year focused on preparing two final reports. The first is the "National Dutch Elm Disease Demonstration Program: State Summary Report 1978-1981," which was prepared by personnel

from the State agencies involved in the Program. The second, to be published in 1983, will be a "National DED Management Guide." This will be available through State Forestry and Extension agencies. The purpose of this guide will be to describe to States and municipalities how to develop and perform successful DED control programs in the United States. This guide will incorporate information from each of the five demonstration States, based on their experiences in establishing and performing the Program. Several other DED specialists throughout the country will contribute to the guide. It is expected that this will be an excellent and appropriate final touch to the successful National DED Demonstration Program.



APPENDIX A

Table 1a. Breakdown of FY 1978 Allocations, National DED Demonstration Program.

Region or Area	Forest Service	Extension Service	Total
<b>Northeastern Area</b>			
Minnesota	\$ 858,000	\$116,000	\$ 974,000
Wisconsin	275,200	34,700	309,900
Coordination	40,000		40,000
General Assistance	66,500		66,500
<b>Southeastern Area</b>			
Georgia	209,000	42,000	251,000
<b>Region 2</b>			
Colorado	234,000	35,000	269,000
<b>Region 5</b>			
California	224,000	45,000	269,000
Washington Office	<u>78,600</u>	<u>242,000</u>	<u>320,600</u>
<b>Total</b>	<b>\$1,985,300</b>	<b>\$514,700</b>	<b>\$2,500,000</b>

Table 1b. Breakdown of FY 1979 Allocations, National DED Demonstration Program.

Region or Area	Forest Service	Extension Service	Total
<b>Northeastern Area</b>			
Minnesota	\$ 767,700	\$116,000	\$ 883,700
Wisconsin	423,500	36,900	460,400
Coordination	40,000		40,000
General Assistance	214,200		214,200
<b>Southeastern Area</b>			
Georgia	229,000	57,000	286,000
<b>Region 2</b>			
Colorado	254,000	40,000	294,000
<b>Region 5</b>			
California	244,000	47,700	291,700
Washington Office	<u>80,000</u>	<u>50,000</u>	<u>130,000</u>
<b>Total</b>	<b>\$2,252,400</b>	<b>\$347,600</b>	<b>\$2,600,000</b>

APPENDIX A (continued)

Table 1c. Breakdown of FY 1980 Allocations, National DED Demonstration Program.

Region or Area	Forest Service	Extension Service	Total
<b>Northeastern Area</b>			
Minnesota	\$ 450,000	\$116,000	\$ 566,000
Wisconsin	450,000	37,000	487,000
Coordination	40,000		40,000
General Assistance			
<b>Southeastern Area</b>			
Georgia	110,000	57,000	167,000
<b>Region 2</b>			
Colorado	210,000	40,000	250,000
<b>Region 5</b>			
California	300,000	47,000	347,000
Washington Office	<u>143,000</u>		<u>143,000</u>
<b>Total</b>	<b>\$1,703,000</b>	<b>\$297,000</b>	<b>\$2,000,000</b>

Table 1d. Breakdown of FY 1981 Allocations, National DED Demonstration Program.

Region or Area	Forest Service	Extension Service	Total
<b>Northeastern Area</b>			
Minnesota	\$ 97,000	\$ 39,000	\$136,000
Wisconsin	83,000	16,000	99,000
Coordination	40,000		40,000
General Assistance	10,000		10,000
<b>Southeastern Area</b>			
Georgia	21,500	21,500	43,000
<b>Region 2</b>			
Colorado	63,000	16,000	79,000
<b>Region 5</b>			
California		48,500	48,500
Washington Office	<u>44,500</u>		<u>44,500</u>
<b>Total</b>	<b>\$359,000</b>	<b>\$141,000</b>	<b>\$500,000</b>



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